

Amendments to the Specification

Please replace the paragraph beginning at page 1, line 21 with the following amended paragraph:

In humans, autoimmune diseases such as rheumatoid arthritis tend to be associated with particular HLA specificities. Rheumatoid arthritis (RA) in particular is presently believed to be associated on a genetic level with the Class II HLA haplotypes DW4, DW14, DW15 (all with DR4 specificity) and/or DR1. Each of these haplotypes include an amino acid sequence which is commonly referred to as the "susceptibility sequence" (hereafter, "RA susceptibility sequence"; ~~see, SEQ ID NOs~~ see SEQ ID NOS: 1 and 2). The RA susceptibility sequence is known to vary at one amino acid; to wit, QRRAA (SEQ ID NO: 3) and QKRAA (SEQ ID NO: 2) (hereafter, "Q(R/K)RAA"). More than 90% of adult patients with seropositive RA have also been found to have HLA DR antigens with the RA susceptibility sequence in the third hypervariable region of the molecule. The RA susceptibility sequence has not been implicated in the onset of juvenile RA (JRA), except in patients suffering from severe, seropositive JRA.

Please replace the paragraph beginning at page 2, line 15 with the following amended paragraph:

The QRRAA (SEQ ID NO: 3) variant of the susceptibility sequence has been identified on HLA haplotypes DW14, DW15 and DR1. The QKRRA (SEQ ID NO: 2) variant has been identified on HLA haplotype DW4. Highly conserved homologs of the variants have also been identified in the Epstein-Barr virus glycoprotein gp110, as well as the dnaJ heat shock proteins from *Escherichia coli*, as well as the bacterial species *Klebsiella*, *Prototus*, *Salmonella*, and *Lactococcus*.

Please replace the paragraph beginning at page 37, line 22 with the following amended paragraph:

Lymphocytes from patients with early stage RA were contacted with one of two RA susceptibility sequence peptides according to the protocol described in Example II. The peptides

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used were either a 15 amino acid synthetic peptide having the wild-type sequence
QKRAAYDQYGHAAFE (SEQ ID NO: 4) or a 15 amino acid synthetic mutant peptide having
the sequence DERAAYDQYGHAAFE (SEQ ID NO: 5).